

# Helium Measurements at Soudan

MINOS Collaboration meeting

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# Helium at CDMS



- The “C” is for Cryogenic. Liquid He is the cryogen.
- Dewars are used to fill the cryogen reservoir in the CDMS cold room.
- He losses occur during transfers.

# FIGURES

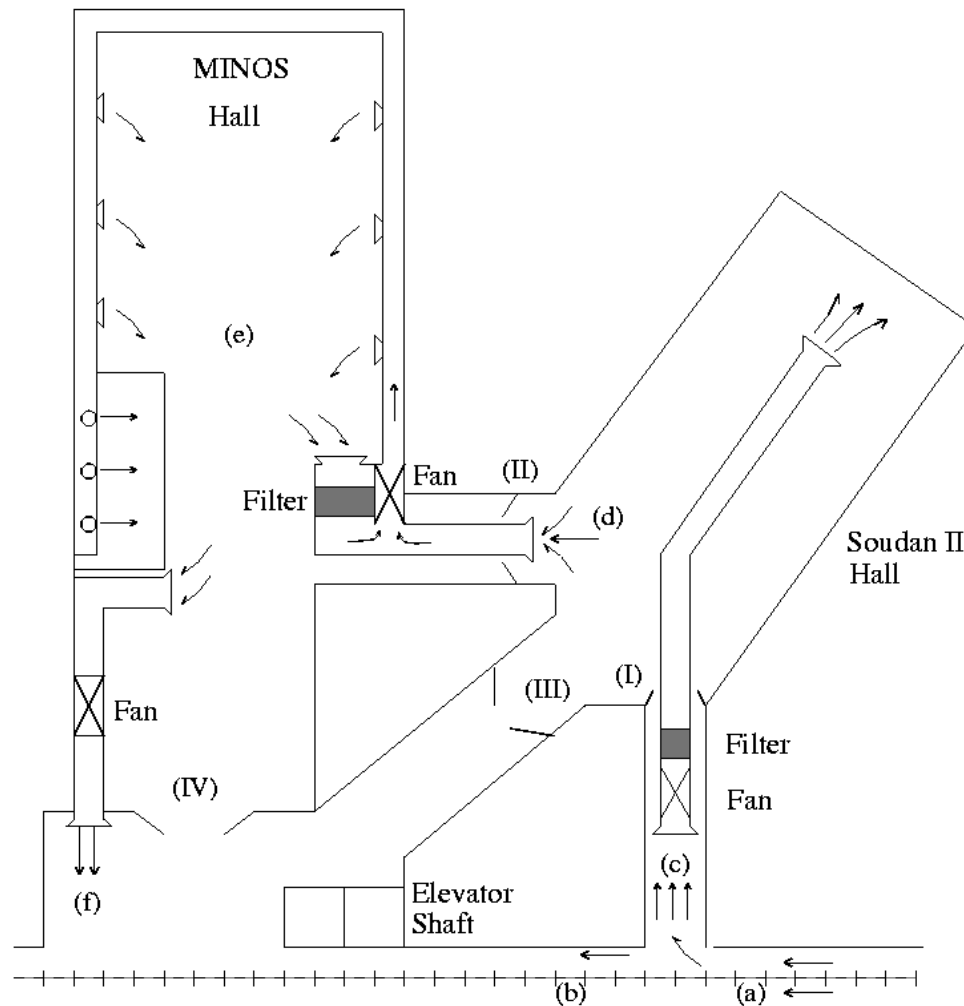


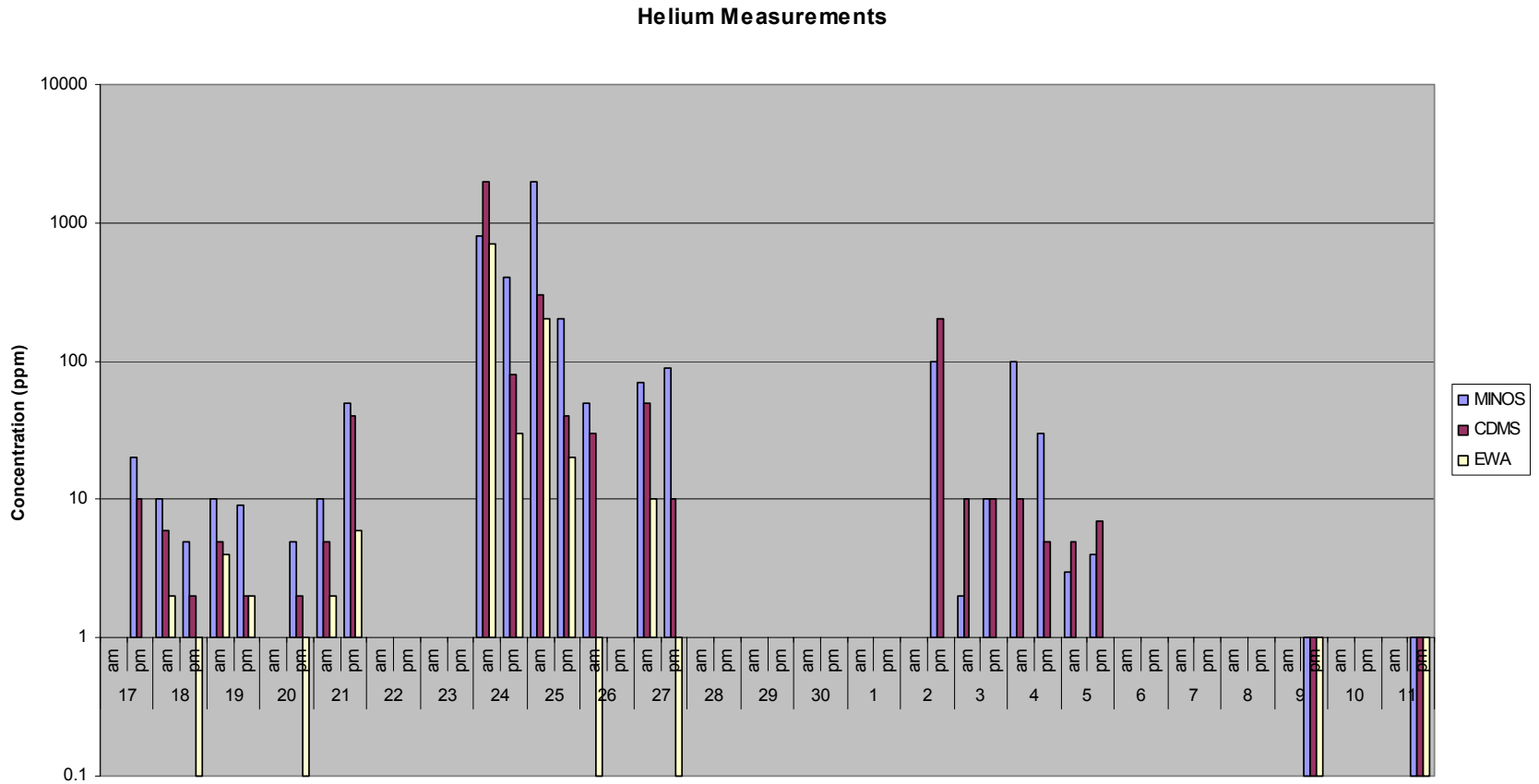
FIG. 1. Schematic picture of air flow for the Far Detector. Measured flow rates at lettered points are listed in Table I

# Helitest



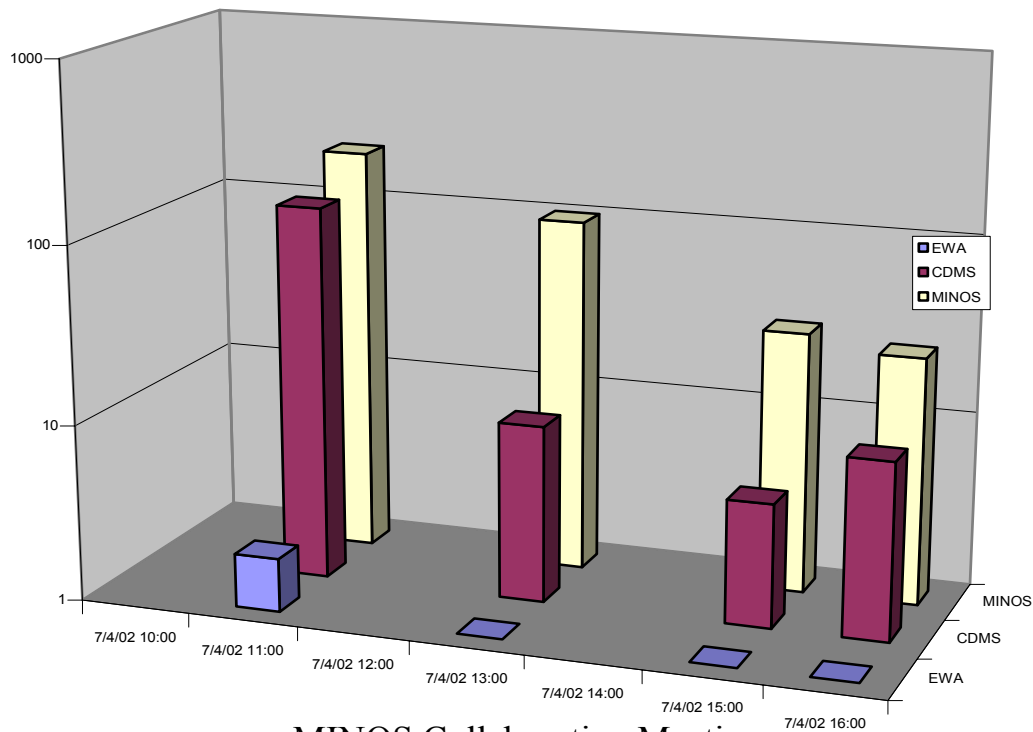
- Measurements are made using a Varian Helitest leak tester.
- The Helitest can detect concentrations of He as low as 2 ppm, according to Varian.
- A portable unit is now in use. Eventually a readout via RS232 will be available.

# Timeline for Helium Measurements



# Helium Falloff

July 4 Helium



# Conclusions

- Minor modifications to the ventilation have not been completely effective.
- A major modification of the ventilation should provide a better fix.
- Caveats:
  - The EWA now sees relatively low He levels; we should make sure that the ventilation change does not increase levels there.
  - A ventilation change may, for better or worse, affect radon levels in the MINOS hall.
  - We should continue to monitor both helium and radon levels.